

ABSTRACT

The present invention is directed to a laser communication receiver for wireless optical communication. A laser communication receiver includes a diffractive optical element to permit detectors at different spatial locations to detect different wavelengths of the optical signal. An immersion lens may be employed to focus the optical signal to a spot size smaller than the photoactive area of the detector. In one detector configuration, the optical signal is folded by a reflective surface and focused on a plurality of stacked detectors. The present invention further provides a method of manufacturing a detector and immersion lens assembly that provides a high degree of alignment between the lens and the corresponding detector.

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